

Water-Quality Daily Data

What are Daily Data?

Daily data are derived by summarizing time-series data for each day for the period of record. The time-series data used to derive daily values, sometimes referred to as real-time or instantaneous values may be collected as often as every minute. These data are used to calculate daily data, such as the daily mean, median, maximum, minimum, and/or other derived values. Daily data include approved, quality-assured data that may be published, and provisional data, whose accuracy has not been verified.

General steps to retrieve Water-Quality Daily Data

Retrieving daily data is a multi-step process. The general steps are summarized here. These steps permit users to control the amount and types of data that are retrieved. A more detailed example and explanation follows.

1. **Choose Site Selection Criteria** – Identify the site-selection criteria that will be used to search for sites; for example, to obtain a particular Site type and County, check the Site type and County boxes.
2. **Define the specific Site Selection Criteria** – Define specific choices for site selection criteria. For example, if “County” were selected as a criterion, specify the desired county name(s).
3. **Choose the Output format** – Output options include either summaries or actual data for selected sites.

Water-Quality Daily Data

Example: Retrieval for Water-Quality Daily Data

To begin, click the **Daily Data** button from the Water-Quality screen. For this example, Colorado Water-Quality data is used.

USGS Water-Quality Data for Colorado

Real-time Data (37 sites)

Real-time data are time-series (recorded at fixed intervals) data from automated equipment and represent the most current hydrologic conditions. Measurements are commonly recorded at 5-60 minute intervals and transmitted to the NWIS database every 1-4 hours. Real-time data are available online for 31 days.

Daily Data (78 sites)

Daily values are summarized from time-series data for each day for the period of record and may represent the daily mean, median, maximum, minimum, and/or other derived value. Daily values include approved, quality-assured data that may be published, and more recent provisional data, whose accuracy has not been verified. [Example](#).

Statistics (67 sites)

Daily

Monthly

Annual

Statistics are computed from approved daily mean time-series data at each site. These links provide summaries of approved historical daily values for daily, monthly, and annual (water year or calendar year) time periods.

Field/lab samples (14,481 sites)

Data from field and/or laboratory analyses of water samples, biological tissue, stream sediments, or other environmental samples.

The number of possible sites for the data category is listed in parentheses to the right of the data category button.

Water quality samples are collected at several site types, such as surface water or ground water. For the water quality data category, the number represents sites where water quality data parameters are available.

Water-Quality Daily Data

Step 1 - Choose Site Selection Criteria

Step 1 involves choosing the criteria for Site Selection. Select one or more boxes from the four categories: Site Location, Site Identifier, Site Attribute, and Data Attribute.


















In the next step, specific site selection criteria are defined. Water-quality data may be available at all site-types. In this example, nothing is selected from the site selection criteria. Water quality parameters can be specified later.

USGS Water-Quality Daily Data for Colorado

Choose Site Selection Criteria

Choose from the following criteria to constrain the number of sites selected. If no additional site-selection criteria are chosen and no additional specifications are defined on the following page then output will be for all 78 sites in Colorado that have water-quality daily values data.


Water-quality [daily data example](#).

Site -- Location --	Site -- Identifier --	Site -- Attribute --	Data -- Attribute --
<input type="checkbox"/>  County	<input type="checkbox"/>  Site Name	<input type="checkbox"/>  Site type	<input type="checkbox"/>  Number of observations
<input type="checkbox"/>  Hydrologic Unit	<input type="checkbox"/>  Site Number	<input type="checkbox"/>  Drainage area	
<input type="checkbox"/>  Lat-Long box	<input type="checkbox"/>  Multiple Site Numbers	<input type="checkbox"/>  Well depth	
	<input type="checkbox"/>  Agency Code	<input type="checkbox"/>  Hole depth	
	<input type="checkbox"/>  File of Site Numbers	<input type="checkbox"/>  National aquifer (by code)	
		<input type="checkbox"/>  National aquifer (by name)	
		<input type="checkbox"/>  Local aquifer (by code)	
		<input type="checkbox"/>  Local aquifer (by name)	

Water-Quality Daily Data

Step 2 - Define the specific Site Selection Criteria

For Step 2, select the water quality parameters of interest, or select nothing and all sites with water quality data will be retrieved.

 **Available parameters** -- select sites that have data for the following parameters:

Select one or more parameters --or-- leave blank to select all:

Water Level/Flow Parameters	Meteorological Parameters
<input type="checkbox"/> Depth to water level, ft below land surface (2 sites)	<input type="checkbox"/> Barometric pressure, mmHg (1 sites)
<input type="checkbox"/> Elevation above NGVD 1929, ft (1 sites)	<input type="checkbox"/> Precipitation, in (4 sites)
<input type="checkbox"/> Gage height, ft (11 sites)	<input type="checkbox"/> Precipitation, total, in (79 sites)
<input type="checkbox"/> Reservoir storage, acre-ft (10 sites)	<input type="checkbox"/> Temperature, air, °C (5 sites)
<input type="checkbox"/> Streamflow, ft ³ /s (1195 sites)	<input type="checkbox"/> Wind direction, degrees clockwise from north (1 sites)
	<input type="checkbox"/> Wind speed, mph (1 sites)
Water Quality Parameters	
<input checked="" type="checkbox"/> Dissolved oxygen, water, unfiltered, mg/L (7 sites)	
<input checked="" type="checkbox"/> Specific conductance, water, unfiltered, µS/cm at 25 °C (63 sites)	
<input checked="" type="checkbox"/> Suspended sediment concentration, mg/L (6 sites)	
<input checked="" type="checkbox"/> Suspended sediment discharge, tons/d (7 sites)	
<input checked="" type="checkbox"/> Temperature, water, °C (72 sites)	
<input checked="" type="checkbox"/> Turbidity, water, unfiltered, NTU (2 sites)	
<input checked="" type="checkbox"/> pH, water, unfiltered, field, standard units (10 sites)	

Specification of daily data parameters is an option that provides a more advanced search. In this example, all water quality parameters are selected.

Important: All **Available parameters** for daily data are listed by default. Not all parameters are available for all sites. When a specific site has been selected, the available parameters will be shown.

Water-Quality Daily Data

Step 3 – Choose the Output format

Choose from one of the two output options.

The first set of options, **Display Summary of Selected Sites**, provides lists of sites or descriptive site information.

Choose Output Format
Display Summary of Selected Sites
Choose one of the following options for displaying descriptions of the sites meeting the criteria above:

☒ ? Table of sites sorted by Site number grouped by
☐ ? Scroll list of sites -- allows selection of data for multiple sites
☐ ? Brief descriptions -- allows selection of data for multiple sites
☐ ? Site-description information displayed in table format

Agency
Site identification number
Site name
DMS latitude

<--Select fields to include in site-description output

☐ ? Save file of selected sites to local disk for future upload

The second set of options, **Retrieve USGS Water Quality Daily Data for Selected Sites**, provides tables or graphs of data.

Retrieve USGS Water-Quality Daily Data for Selected Sites
Choose one of the following options for displaying data for the sites meeting the criteria above:

☒ ? Retrieve data for:
☒ the previous 365 days (1 - 55555) **OR**
☐ for the date range: First date: Last date: (1854-04-24 through 2006-05-31)

Output Options:
☐ ? Graphs of data -- ☐ use arithmetic Y-axis for discharge
☐ ? Graphs of data with long-term statistics -- ☐ use arithmetic Y-axis for discharge
☐ ? Graphs of data with field measurements -- ☐ use arithmetic Y-axis for discharge
☐ ? Table of data
☐ ? Tab-separated data YYYY-MM-DD Save to file

In this example, the defaults are used and a table of sites sorted by site number is produced. When a site is selected, data for the last 365 days are retrieved.

Water-Quality Daily Data

USGS Water-Quality Daily Data for Colorado

Site Selection Results -- 78 sites found

Parameter codes = 00300, 00095, 00076, 80154, 00010, 00400, 80155

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

Agency	Site Number	Site Name
USGS	06619400	CANADIAN RIVER NEAR LINDLAND, CO.
USGS	06619450	CANADIAN RIVER NEAR BROWNLEE, CO.
USGS	06704500	DUCK CREEK NEAR GRANT COLORADO
USGS	06705500	GENEVA CREEK AT GRANT, CO.
USGS	06710000	SOUTH PLATTE RIVER AT LITTLETON, CO.
USGS	06711565	SOUTH PLATTE RIVER AT ENGLEWOOD, CO.
USGS	06713500	CHERRY CREEK AT DENVER, CO.
USGS	06714400	SOUTH CLEAR CREEK ABV LOWER CABIN CREEK RESERVOIR
USGS	06714600	SOUTH CLEAR CRK ABV LEAVENWORTH CRK NR GEORGETWN.
USGS	06714800	LEAVENWORTH CREEK @ MOUTH NR GEORGETOWN, CO
USGS	06719505	CLEAR CREEK AT GOLDEN, CO.

When a site is selected, the result is a list of available parameters and graphs of the data. The graph for specific conductance is shown as an example. Output formats and the data retrieval period can be changed using features in the yellow box.

USGS 06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO.

[PROVISIONAL DATA SUBJECT TO REVISION](#)

Available data for this site

Time-series: Daily data

GO

Station operated by the U.S. Geological Survey in cooperation with [City of Englewood](#).

Additional [station information](#).

Current shift adjusted stage-discharge [rating table](#). These tab delimited tables are updated daily.

[What is a shift adjusted stage-discharge rating?](#)

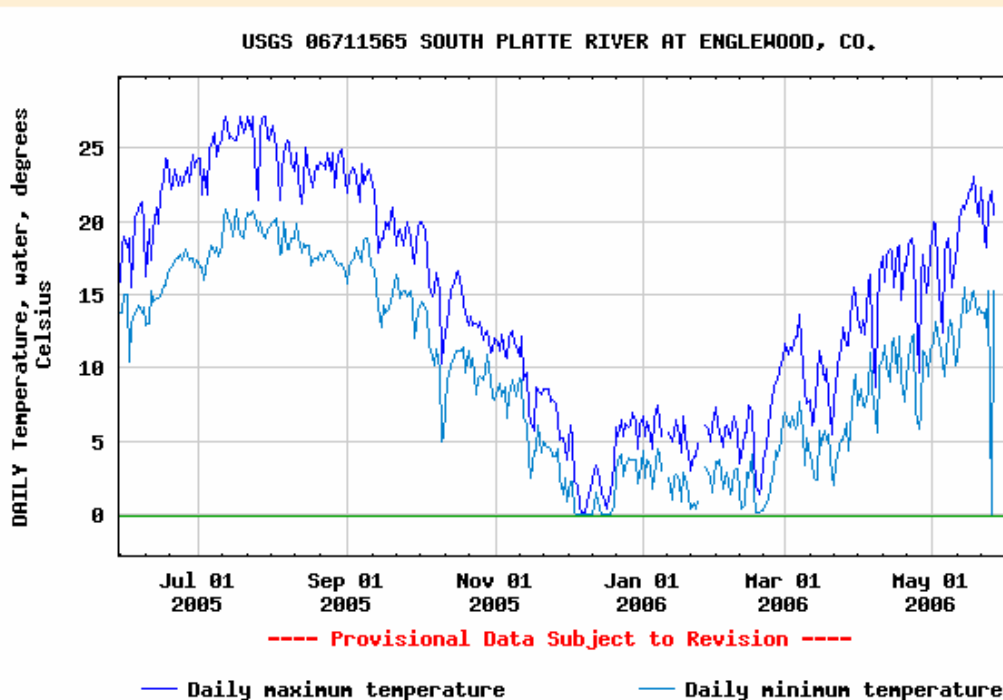
This station managed by the Lakewood Field Office.

Available Parameters		Period of Record		Output format	Begin date	End date	GO
<input type="checkbox"/>	All 5 Available Parameters for this site			Graph	2005-05-29		
<input checked="" type="checkbox"/>	00060 Discharge (Mean)	1983-02-01	2006-05-26				
<input checked="" type="checkbox"/>	00010 Temperature, water (Max.,Min.)	1995-10-01	2006-05-26				
<input checked="" type="checkbox"/>	00095 Specific cond at 25C (Mean)	1996-10-01	2006-05-26				
<input checked="" type="checkbox"/>	00300 Dissolved oxygen (Max.,Min.)	1996-10-23	2006-05-26				
<input checked="" type="checkbox"/>	00400 pH (Max.,Min.)	1996-10-01	2006-05-26				

Water-Quality Daily Data

A thermograph of water temperature is shown for the South Platte River at Englewood, CO.

Temperature, water, degrees Celsius



Another useful output format is the **Graph w/stats** option which shows the median daily temperature plotted with daily maximum and minimum temperature.

Temperature, water, degrees Celsius

